

Docket Number: 1085-022-PWH
Application No. 09/845,945
Amendment C

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A device operable for simultaneously producing laser radiation having ~~two different~~ a wavelength of about $2\mu\text{m}$, the device comprising:
 - a Tm:YAG sample; and
 - a source of pumping radiation having a wavelength of about $1\mu\text{m}$, the source of pumping radiation comprising:
 - a resonant cavity that includes a pair of first and second spaced apart pair of members that are substantially reflective to radiation having a wavelength of about $1\mu\text{m}$, ~~wherein, as compared to the second member, the first member is selected to have a lower reflectivity of wavelengths of about $1\mu\text{m}$;~~
 - and a pumped Nd:YAG sample interposed between the first and second pair of members, ~~wherein a portion of pumping radiation having a wavelength of about $1\mu\text{m}$ is emitted through the first member as a first laser beam;~~
 - a source of pumping radiation for the Nd:YAG sample;
 - the resonant cavity also having the Tm:YAG sample located therein and between a ~~second the first pair of members, one of which second pair of members is substantially reflective to radiation having a $2\mu\text{m}$ wavelength, and the source Nd:YAG sample being~~ arranged so that at least some of the radiation produced by the source is absorbed by the Tm:YAG sample, causing the Tm:YAG sample to emit a second laser beam with radiation having a wavelength of about $2\mu\text{m}$.
- 2 – 5. (canceled)
6. (currently amended) A device according to Claim 15, wherein the source of pumping radiation for the Nd:YAG sample is ~~arranged along the length of the sample to pump radiation from a side of the Nd:YAG sample~~ comprises a plurality of arrays of laser diodes.
7. (currently amended) A device according to Claim 15, wherein the source of pumping radiation for the Nd:YAG sample comprises ~~either a plurality of laser diodes or a plurality of~~ flashlamps.

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8. (canceled)

9. (currently amended) A device according to Claim 18, wherein the second pair of members is located within the resonant cavity.

10. (currently amended) A device according to Claim 1, wherein the ~~device produces second laser beam radiation has having~~ a wavelength of substantially $2.02\mu\text{m}$.

11. (previously presented) A device according to Claim 1, wherein the source of radiation having a wavelength of about $1\mu\text{m}$ is a source of radiation having a wavelength of substantially $1.064\mu\text{m}$.

12. (currently amended) A method of producing laser radiation ~~having a wavelength of about $2\mu\text{m}$~~ , the method comprising the steps of:

providing a Tm:YAG sample;

providing a resonant cavity that includes a first pair of members that are substantially reflective to radiation having a wavelength of about $1\mu\text{m}$, and a Nd:YAG sample interposed between the first pair of members;

~~selecting one of the first pair of members to reflect less of the radiation having a wavelength of about $1\mu\text{m}$ than does the other one of the first pair of members;~~

locating the Tm:YAG sample within the resonant cavity between the first pair of members ~~and between a second pair of members wherein one of the second pair of members is substantially reflective to radiation having a $2\mu\text{m}$ wavelength;~~ and

pumping the Nd:YAG sample for emitting radiation having a wavelength of about $1\mu\text{m}$ within the resonant cavity so that at least some of the radiation having a wavelength of about $1\mu\text{m}$ is absorbed by the Tm:YAG sample, causing the Tm:YAG sample to emit ~~a first beam of radiation having a wavelength of about $2\mu\text{m}$, and so that a second beam of radiation having a wavelength of about $1\mu\text{m}$ is emitted by the Nd:YAG sample.~~

13 - 22. (canceled)

23. (new) The device of claim 1 wherein the first and second members are selected to have, respectively, 95% and 99% reflectivities of a wavelength of about $1\mu\text{m}$.

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24. (new) The method of claim 12 wherein the selecting step includes selecting one of the first pair of members to reflect about 4% less of the radiation having a wavelength of about $1\mu\text{m}$ than does the other one of the first pair of members.